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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,863	07/03/2001	Robert George Emberty	TUC920010066US1	7313

7590 12/28/2004

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EXAMINER

TZENG, FRED

ART UNIT PAPER NUMBER

2651

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/898,863

Applicant(s)

EMBERTY ET AL.

Examiner

Fred Tzeng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in responsive to the communication filed on August 10, 2004.

Claims 1-17 remain pending.

Response to Arguments

2. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gamble et al (USPN 6,233,143), hereafter as Gamble, in view of Kusunoki (USPN 6,370,444).

RE claims 1, and ⁸ 13 ~~8~~, Gamble discloses the invention substantially as claimed. 76

Gamble discloses a system (see column 1 lines 7-9) comprising: a carrier adapted to support a disk drive (see column 1 lines 11-18, 40-42 and column 2 lines 19-20; the carrier 11); a drawer having a receptacle (see column 2 lines 25-26, 30-32 and column 3 lines 5-7; the frame 13 is the drawer and the docking bay 73 is the receptacle); a drive

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mechanism mounted in the receptacle (see column 3 lines 7-12; the guide rails 75 and ribs 77); wherein the carrier can be inserted into the receptacle (see column 1 lines 53-55 and column 3 lines 9-12; the carrier 11 can be inserted into the docking bay 73).

However, Gamble does not specifically disclose a sensor means located in the receptacle for sensing the carrier and signals its associated control means to actuate the drive mechanism to engage and draw the carrier into the receptacle, such that the carrier is fully seated in the receptacle.

Kusunoki teaches using slit sensor 27 to sense the position of carrier 13 and signals MPU 33 to reposition carrier 13 to a proper position for transporting disc 1 between shelf 3 of magazine 5 and drive 11 (see column 1 lines 12-14, column 5 line 66 - column 6 line 8 and column 8 lines 6-9). The slit sensor 27 and MPU 33 can be utilized in Gamble invention because the slit sensor 27 can sense the positioning of a carrier and MPU 33 can reposition the carrier according to the signals sent by the slit sensor.

Gamble and Kusunoki are combinable because they are from the same field of endeavor. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Gamble invention by including a sensor for sensing position of the carrier and signals its control means MPU to actuate the drive mechanism to engage and draw the carrier into the receptacle, such that the carrier is fully seated in the receptacle as expressly taught by Kusunoki in column 1 lines 12-14, column 5 line 66 - column 6 line 8 and column 8 lines 6-9. Because Kusunoki's slit

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sensor 27 can sense the positioning of the carrier and its control means MPU 33 can adjust the positioning of the carrier according to the signals sent by slit sensor 27.

RE claims 2 and 9, Gamble and Kusunoki disclose the invention except that the carrier has a recess containing a pin that is engaged by the drive mechanism. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a pin contained in a carrier for engaging by a drive mechanism since the examiner takes Official Notice of the equivalence of a pin and a channel 31 (see Gamble, column 3 lines 9-14) for their use in the process of engaging a carrier to receptacle and the selection of any of these known equivalents to engage a carrier to a receptacle by a drive mechanism would be within the level of ordinary skill in the art.

RE claims 3 and 14, Gamble and Kusunoki disclose the invention except that the sensor means senses a magnet on the carrier. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use magnet on the carrier for sensing by a sensor since the examiner takes Official Notice of the equivalence of sensing a magnet by a sensor and sensing a light-sensing element by a sensor (see column 4 lines 9-17 of Kusunoki) for their use in process of sensing the positioning of a carrier and the selection of any of these known equivalents to sense the positioning of a carrier would be within the level of ordinary skill in the art.

RE claims 4 and 10, Gamble and Kusunoki disclose the invention except that the sensor means comprises a Hall-Effect sensor. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a Hall-Effect sensor since the examiner takes Official Notice of the equivalence of the Hall-Effect

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sensor and the light-emitting slit sensor (see Kusunoki column 6 lines 4-8) for their use in sensing the positioning of the carrier and the selection of any of these known equivalents to sense the positioning of the carrier would be within the level of ordinary skill in the art.

RE claims 5, 11 and 15, Gamble and Kusunoki disclose the invention except that the drawer has a self-healing optical signal connector and a magnetic power coupling that are adapted to interconnect with like components on the disk drive. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a self-healing optical signal connector and a magnetic power coupling for interconnecting components on a disk drive since the examiner takes Official Notice of the equivalence of the functioning of a self-healing optical connector and magnetic power coupling in comparison with the functioning of connector 23 (see Gamble column 2 lines 29-30) and docking connector (see column 1 lines 52-53) for their use in connecting a disk drive components to a computer system (see Gamble column 2 lines 29-30).

RE claims 6, 12 and 16, the limitation of that the drive mechanism comprises a motor that drives a worm gear, and a cam that is driven by the worm gear to engage the carrier is considered inherent because Kusunoki teaches a motor drive circuit to cause the carrier to move downward and stop at the reference position (see column 5 line 67 - column 6 line 1).

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RE claims 7 and 17, the limitation of that the carrier is unseated and ejected from the drawer by reversing the drive mechanism is considered inherent because Kusunoki teaches the process of ejecting a disc (see column 6 lines 9-18).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051, (formal communications, please mark

"EXPEDITED PROCEDURE")

Or:

(703) 308-6606 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021

Crystal Drive, Arlington. V.A., Sixth Floor (receptionist).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Tzeng whose telephone number is 703-305-4841.

The examiner can normally be reached on weekdays from 9:30 am to 6:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 703-305-4040. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-5710 for After Final communications.

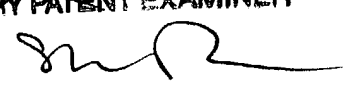
8. Informal regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fred F. Tzeng

December 24, 2004



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